DEPARTMENT OF THE ARMY
Medical Department Activity
Fort Huachuca, Arizona 85614-7040

MEDDAC Memorandum 20 March 2003
No. 200-3

Environmental Quality
HAZARDOUS MATERIAL/HAZARDOUS WASTE MANAGEMENT

1. HISTORY. This issue publishes a revision of this publication.

2. PURPOSE.

a. To establish policies and procedures for the management of hazardous material (HM) and hazardous waste (HW) at all medical treatment facilities located at Fort Huachuca, AZ.

b. To provide specific guidance on federal, state, and installation regulations for hazardous waste satellite accumulation point management.

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* This memorandum supersedes MEDDAC Memo 200-3 dated 22 Feb 01

3. SCOPE. This policy applies to all military and civilian employees, students and volunteers of Raymond W. Bliss Army Health Center (RWBAHC), Dental Activity (DENTAC) and Veterinary Activity (VETAC) health care facilities located on Fort Huachuca, AZ. Throughout this document the term MEDDAC will include all of the health care facilities as mentioned above.

4. REFERENCES. See Appendix A

5. DEFINITIONS.

a. General Waste. Waste that is disposed of by normal waste disposal methods without pretreatment. This includes garbage, rubbish, and nonregulated medical waste. Garbage is putrescible solid waste resulting from the handling, preparation, cooking, or serving of food. Rubbish is nonputrescible solid waste comprised of two categories, combustible, primarily organic material including paper, plastics, cardboard, wood, rubber and bedding and noncombustible, which is primarily inorganic material including glass, ceramics and metals.

b. Hazardous Material. A substance or material which has been determined by the Secretary of Transportation to be capable of posing unreasonable risk to health, safety, and property when transported in commerce and which has been designated in 49 Code of Federal Regulations (CFR) 171.8.

c. Hazardous Waste. Resource Conservation and Recovery Act (RCRA) defines hazardous waste as a solid waste or combination of solid wastes, which because of its quantum, concentration, or physical chemical or infectious characteristic, may contribute to an increase in mortality or increase in serious irreversible illness; or pose a substantial presence or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed. Hazardous wastes are either listed in 40 CFR 261 or meet the characteristic waste defined as flammable, corrosive, reactive or toxic.

6. RESPONSIBILITIES.

a. Commanders, RWBAHC, DENTAC and VETAC:

(1) Develop and implement a comprehensive HM/HW program.

(2) Ensure that all military and civilian staff members understand and comply with HM/HW management regulations.

(3) Appoint Satellite Accumulation Managers

b. HM/HW Program Manager - Environmental Science Officer (ESO)

(1) Conduct quarterly inspections of HW satellite accumulation point (SAPs). The inspection will include a review of training records, weekly inspections, and the facility. The SAP manager will receive a copy of the inspection report that will list deficiencies and corrective actions to be taken. Deficiencies that are not promptly corrected will be reported to the appropriate commander.

(2) Provide guidance on hazardous waste minimization.

(3) Provide training and information pertaining to HM/HW management to staff and SAP managers as needed.

(4) Coordinate with Directorate, Engineering and Housing (DEH), Directorate Installation Support (DIS) Environmental and Natural Resources Division for training of HM/HW handlers IAW Federal, State, Local, Army and Fort Huachuca (FH) regulations.

(5) Coordinate with DEH, DIS, Arizona Department of Environmental Quality (ADEQ) and other environmental agencies for any matters concerning HM and HW.

(6) Develop performance standards and evaluate the HM/HW program annually.

c. Safety Manager will:

(1) Ensure that all appropriate protective measures are implemented for the military and civilian staff with guidance from Preventive Medicine Wellness and Readiness Service.

(2) Serve as the Hazard Communications (Hazcom) Program Coordinator for the MEDDAC.

d. Chief, Logistics Division will:

(1) Supervise the collection, transportation and disposition of HM/HW. HW will be collected from each SAP and transported to the installation permitted HW facility, building 90403. All HW will be turned in at least every 3 months.

(2) Ensure that all material received is correctly labeled and that a Material Safety Data Sheet (MSDS) is available with initial shipment of a new product.

e. NCOIC/Safety NCOs of areas where hazardous materials are utilized will:

(1) Ensure that all personnel handling HM/HW are properly trained and certified initially and annually. An outline of required training is included in Appendix C.

(2) Develop a site-specific hazcom program, with guidance from the MEDDAC Safety Manager, to educate staff for all hazardous materials utilized.

(3) Post MEDDAC spill contingency plan (Appendix B) on department/section safety board. Ensure all staff members are aware of actions to be taken in the event of a HM/HW incident. The ESO will verify during scheduled Environment of Care (EOC) inspections.

(4) Ensure that there is adequate facilities and equipment for storage, utilization and disposal of hazardous materials.

(5) Research and select the least hazardous when purchasing HM.

(6) Conduct weekly inspections of HM storage areas to ensure proper storage (i.e., container is in good condition, materials are compatible, etc.)

(7) Develop a HM/HW profile to track HM from receipt to disposal. Sections will demonstrate that all HM was used or disposed of properly.

f. Satellite Accumulation Point Managers will:

(1) Be responsible for the management of the SAP IAW Federal, State, Local, Army and FH regulations and this MEDDAC memorandum.

(2) Ensure that all HW is placed in an established SAP and properly turned in to the installation Hazardous Waste Warehouse for disposal per Fort Huachuca HW turn-in procedures.

(3) Ensure that HW is placed in proper containers and maintained IAW FH Reg 420-13, Fort Huachuca Fire Prevention and Protection Program.

(4) Ensure that an approved fire extinguisher is readily available at SAP if ignitable HW is stored in the SAP.

(5) Ensure that the SAP has a spill kit. The spill kit should be selected for the specific waste at the SAP. The HM/HW manager will provide consultation for spill kit selection.

(6) Ensure that the SAP has appropriate warning signs.

(7) Notify HM/HW manager of any significant changes in HW generation or accumulation.

(8) Inspect HW containers for any defects and take immediate corrective action when defects are discovered.

(9) Ensure that containers are kept closed at all times except when they are being filled.

(10) Ensure that containers intended for HW storage are marked properly before receiving any HW. The HW label will be filled with all information except the accumulation start date. See details in paragraph 8 of this Memorandum.

g. Environmental Science Officer or Industrial Hygienist will provide guidance as requested to include PPE selection, chemical hazards, hazard information, and compliance.

7. HAZARDOUS MATERIAL SELECTION.

a. The HM/HW Manager will review the HM program management annually.

b. Each section is responsible for researching and selecting the least hazardous HM if a choice is possible. The HM/HW Manager will be consulted if the section cannot determine which product is least hazardous.

c. Each section will order and maintain the minimum amount of HM to accomplish the task.

8. HAZARDOUS MATERIAL HANDLING.

a. Consult MEDDAC Memorandum 200-1, Transportation of Medical Hazardous Material and Hazardous Waste.

b. Monitoring of hazardous gases and vapors.

c. Industrial Hygiene Section of PMWARS will perform as a minimum quarterly evaluation of the Waste Anesthetic Gases. Any additional requirement on monitoring of gases and vapors may be addressed to the Chief of IH, which in turn will determine the need to perform such surveillance.

9. HAZARDOUS MATERIAL STORAGE. Incompatible HM/HW must be segregated or isolated from each other to minimize the danger of accidents and unnecessary generation of HW. Segregation or isolation includes both maintaining distance between incompatible groups of HM and preventing spilled materials from mixing. Incompatible materials will be isolated from each other to prevent spills. HM can be contained in plastic tubs, cabinets with spill wells, or boxes with absorbent.

a. General guidelines for storage.

(1) Containers will be compatible with their contents.

(2) Containers will be closed.

(3) Glass containers will have some type of secondary containment to prevent breakage and contain leaks.

(4) Solid materials will be kept in rigid containers, not plastic or paper bags that can be punctured.

b. Methods for determining compatibility.

(1) Environmental Protection Agency (EPA) regulations for storage of HW (40 CFR, Part 261, Appendix V) provide examples of incompatible wastes and harmful consequences, which result from mixing incompatible waste. This method provides a gross comparison of wastes, but it is not as comprehensive as the other two methods.

(2) HW Compatibility Chart. The California Department of Health Services conducted a study for the EPA Solid and Hazardous Waste Researched Division and developed a compatibility

chart. This chart is located in the United States Army Center for Health Promotion and Preventive Medicine (USACHPPM) manual Compatibility of Hazardous Materials, February 1999. The HM/HW manager and the Unit Safety Manager maintain copies.

(3) Hazardous Material Information System (HMIS) Compatibility Method. This method is located in the same reference mentioned above.

10. HAZARDOUS MATERIAL STORAGE FACILITIES.

a. HM storage is regulated by various federal and state regulations. The primary goals are to safeguard the HM storage facilities and to protect all employees and patients at the medical treatment facilities. Detailed guidelines for HM management can be found in TM 38-410, Storage and Handling of Hazardous Material.

b. To plan effectively for the location, design and construction of HM storage areas:

(1) The quantities and classes (e.g., flammable, corrosive, toxic, etc.) of HM to be stored should be identified. The quantity of HM is a key factor in determining the size requirements for the following reasons:

(a) It allows for the proper design of the storage area (i.e. dividing the main structure into various bays or compartments) so that incompatible materials can be stored separately. Additional mixing of incompatible material (e.g., acids and bases), under a worse case scenario, can result in fires, explosions or emissions of toxic gases.

(b) It allows for the incorporation of required safety features in all facilities. These safety features will vary for different classes of HM. Consult Preventive Medicine Wellness and Readiness Service (PMWARS), Safety Manager, HM/HW Manager, or Environmental and Natural Resources Division (DIS) for guidance on this issue.

(2) All applicable regulations, standards and codes should be reviewed as they are updated. This includes OSHA requirements (29 CFR 1910), National Fire Protection Association (NFPA) standards, Environmental Protection Agency (EPA), State, Army and FH regulations.

(3) All requirements for a safe and healthful operation should be identified on a continuing basis. Most of this information will be derived from the review discussed in paragraph 10b(2) above. The requirements for these features will vary with different classes of HM to be stored.

(a) General Ventilation (i.e.) number of air changes per unit time).

(b) Fire Protection i.e., sprinklers, firewalls).

(c) Emergency exits.

(d) Heat, smoke and explosion venting.

(e) Electrical requirements.

(f) Temperature and humidity controls.

(g) Communication (both internal and external).

(h) Eye washes and emergency showers.

(I) Emergency power source.

(j) Container stacking limitations.

c. Hazardous materials require a high degree of specialized handling mandated by public law and regulation. Failure to properly identify, store and handle such material poses serious risk to human health, property, and the environment. It is imperative that all personnel required to physically handle a HM understand all potential hazards associated with the commodity.

d. Accurate identification and proper classification of such materials is paramount for safe and effective storage and handling of HM. Placards, labels, material safety data sheets (MSDS), product literature, warning statements and other methods of identification are used to assess the physical hazards of such materials. The purpose of this section of the Memorandum is to outline the basics of HM management. This does not relieve an individual of responsibility for displaying full awareness of known and potential hazards. Personnel handling HM will be responsible for compliance with mandatory procedures set forth through Federal, State, Local, and Army and FH regulations.

11. HAZARDOUS MATERIAL USAGE. Except for trained personnel, newcomers will be trained on the handling and usage of hazardous materials in their work areas prior to beginning work.

12. HAZARDOUS MATERIAL SPILLS AND DISPOSAL.

a. All sections that store or use HM will know the proper spill response procedures before a spill occurs. The procedure for spill response is found in Appendix B, Spill Contingency Plan.

b. Routine generation of a HW requires the establishment of a Satellite Accumulation Point (SAP). See paragraph 13 for guidance.

c. Disposal of non-routine generated HW or spill clean up materials also requires compliance with specific regulations. Consult the HM/HW manager or Logistics Division for proper procedures concerning the disposal of HW.

13. SATELLITE ACCUMULATION POINT MANAGEMENT. Hazardous Waste is a subset of HM. The primary goal of HW storage is the containment of the waste until it can be properly treated or disposed. This has resulted in a number of environmental regulations related to HW, but not applicable to HM. Aspects of RCRA are represented in the following paragraphs.

a. The regulatory requirements for the management of a SAP are detailed in 40 CFR 262.34(c)1. This section however, is comprised primarily of cross-references to other regulations that contain the descriptions of the requirements. In order to make it easier for individuals using this regulation, citations are listed following the cross-referenced paragraph. Do not confuse the references with the driving regulatory requirement (40 CFR 262) in which they are included.

b. A generator may accumulate as much as 55 gallons of hazardous waste or one quart of acutely hazardous waste listed in 40 CFR 261.33 in containers at or near the point of generation where waste initially accumulates which is under the control of the operator of the process generating the waste (40 CFR 262.34(c)(1)). The SAPs established within the MEDDAC will accumulate no more than 10 gallons of hazardous waste. This is necessary due to limited space for storage and to reduce the risk which accompanies larger quantities of waste.

(1) Containers that are used to hold HW must be in good condition and must be compatible with the waste that is stored in them (40 CFR 265.171 and 172). Corrective action must be taken immediately if there are any defects noted with the container.

(2) Containers holding HW must remain closed except when it is necessary to add or remove waste and must not be handled in a manner that will cause it to rupture or leak (40 CFR 265.171(a) and (b)).

c. The storage of HW calls for the application of general guidance for safe storage:

(1) Limit the stacking of containers to ensure the integrity of bottom containers.

(2) Use temperature controls and monitor temperature, as excessively high or low temperatures might cause stress on the containers.

(3) Implement humidity and weather controls, as high humidity or exposure to precipitation might result in accelerated corrosion and ultimately leaking containers.

(4) All SAP within the MEDDAC must be in areas that maintain normal room temperature and humidity and do not require additional control measures or monitoring.

d. A storage container holding a HW that is incompatible (40 CFR 264, Appendix V) with any HW stored nearby must be separated from the other by means of a dike, berm, wall or other device (40 CFR 265.177(c)). Each SAP manager will determine if incompatible HW are generated. Containers of incompatible waste must be stored in separate storage cabinets.

e. Containers of liquid waste within the cabinets should be stored in stainless steel or plastic tubs, which contain vermiculite or some similar nonreactive absorbent material. This secondary containment should not be susceptible to damage or reaction with waste being stored. Secondary containment is used to prevent leaking containers from leaking onto the inside of the cabinet.

f. Storage areas for HW must be inspected at least weekly to look for possible leaks or deterioration of containers (40 CFR 265.174).

g. Each HW container must be labeled with the words "Hazardous Waste" the label is completely filled out except for the accumulation start date. HW storage at the SAP is based on quantity not duration of storage. The date will be placed on the container when it is moved to the permitted storage point or if the maximum quantity is reached. If this date is inadvertently placed on the label the 90-day storage requirement for the installation will begin.

14. TRAINING OF PERSONNEL. Training of personnel in handling and managing hazardous materials and waste are available and provided in the web base Healthcare and Education System (HES). In addition, the HM/HW manager will provide supplemental training quarterly to all section NCOIC.

a. Training requirements for personnel handling HM is dictated by Hazard Communication Standard, 29 CFR 1900.1200. Employees must receive training upon initial assignment and whenever a new hazard is introduced into the work area.

b. Personnel will receive an overview of the HM/HW program at Newcomer’s Orientation and will be provided a yearly update at Birth Month Annual Review Training. The unit Safety NCO will provide site-specific training. An outline for unit training by the Safety NCO is provided in Appendix C.

c. Training requirements for HW. Supervisors of personnel handling HW will:

(1) Ensure initial HW management training is provided for all new personnel who are potentially exposed to HW in their work areas.

(2) Provide annual HW management refresher training to all personnel who are potentially exposed to HW/HM.

d. Department/service/activities will monitor and evaluate training. Training topics will reflect assessment of the needs of the work center.

15. RECORD KEEPING:

a. HM. Training will be documented IAW the MEDDAC training regulation and per additional guidance provided by the Deputy Commander for Administration (DCA).

b. HW.

(1) SAP record keeping requirements are detailed in 40 CFR 262.40. All records pertaining to HW Management at the SAP including training documentation, inspection logs, and turn-in documents are legal records and must be treated as such.

(2) Inspection records and training documents shall be retained in a SAP book in a secure place at or near the SAP.

(3) All entries shall be made in ballpoint or indelible ink.

(4) Training records will include:

(a) Job title for each position relating to HW and name of employee filling each position.

(b) A written job description for each position. The job description must include the required skill, education, or other qualifications and duties of personnel assigned to each position.

(c) A written description of type and amount of introductory and continuing HW training for each person.

(d) Documentation that HW management training has been given to and completed by appropriate personnel.

(5) Records will be available for inspection by HW/HM Manager, MEDDAC and Installation Safety, DIS, and Fire Department personnel.

(6) Inspection Logs will include:

(a) Inspection logs for HW containers in the SAP.

(b) Copies of inspection reports.

(c) Material Safety Data sheets (MSDS) for all HM and HW utilized by the activity.

(d) Copies of all DD 1348-1 Turn-in documents for HW.

(e) A copy of the self-inspection list.

16. HM/HW PROGRAM EVALUATION.

a. Performance standards will be developed yearly and will address one or more of the following.

(1) Staff knowledge and skill necessary for their role in managing hazardous materials and waste.

(2) The expected level of staff participation in materials and waste management activities.

(3) Monitoring, inspection, and corrective action.

(4) Routine procedures for emergency and incident reporting that specify when and to whom reports are communicated.

(5) Inspection, preventive maintenance, and testing of applicable equipment.

b. The HM/HW program manager will evaluate the HM/HW program annually. A report will be furnished to the MEDDAC Environment of Care (EOC) Committee.

The proponent of this publication is Preventive Medicine Wellness and Readiness Service. Users are invited to send comments and suggested improvements on DA Form 2028 to, USA MEDDAC, ATTN: MCXJ-PMWARS-EH, Fort Huachuca, AZ 85613-7040.

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APPENDIX A
REFERENCES:

29 CFR 1900, Labor

40 CFR 260-265, Protection of the Environment

DOD 4145.19-R-1, Hazardous Material Storage and Handling Criteria

AR 200-1, Environmental Protection and Enhancement

AR 420-47, Solid and Hazardous Waste Management

AR 40-5, Preventive Medicine

TM 38-410, Storage and Handling of Hazardous Material

Fort Huachuca Interim Policy on Hazardous Waste Minimization and Pollution Prevention

Fort Huachuca Hazardous Waste Satellite Accumulation Point Management Guide

Fort Huachuca Hazardous Waste Training Plan

Fort Huachuca Spill Prevention and Contingency Plan

APPENDIX B
SPILL CONTINGENCY PLAN

Proper management is a key factor in the prevention of Hazardous Material (HM) release or spill. This plan establishes the normal action that the initial observers should take in response to a HM release or spill. Actions taken will be based on working knowledge and information provided by the MSDS for the HM/HW. Do not attempt to manage spill if it is beyond the unit's capabilities.

1. Minor HW/HM spill.

a. Stop all other actions and protect yourself and others from harm. Use appropriate protective clothing if necessary. Remove smoking materials away from the spill or other sources of potential ignition if applicable.

b. Stop the flow if the material is known and it is safe to do so. Use the Material Safety Sheet (MSDS). Turn the container up so the point of exit is up. Temporarily plug the leak and place it in a secondary container.

c. Contain the spill by using an available spill kit.

d. Protect the environment. Cover any floor drains with a mat or other impervious sheet material. Place any sorbent material available in the spill to absorb it.

e. Before disposing, determine if waste is considered a hazardous waste by referring to the MSDS or by calling the MEDDAC HM/HW manager.

f. If waste is considered hazardous, follow procedures for hazardous waste turn-in.

g. Report spill to;

(1) Your supervisor

(2) HM/HW Manager

(3) Industrial Hygienist

(4) Safety Manager

(5) Logistic Division

2. For medium to large spills, call the Fire Department (911). Give information as you can regarding the spill, including the;

a. Spill location

b. Material spilled (if known)

c. Quantity (if known)

d. Action taken so far

e. Your name and current location

3. During duty hour, the supervisor will contact the Safety Manager. After duty hour, contact the Administrative Officer of the Day (AOD).

APPENDIX C
HAZARDOUS MATERIALS/ HAZARDOUS WASTE TRAINING OUTLINE FOR CLINIC NCOICS

The Hazardous Materials/Hazardous Waste (HM/HW) training outline for section specific training will cover at least the following topics as appropriate for the unit. For the Environment of Care standard, Hazardous Materials include Regulated Medical Waste (RMW), MEDDAC Memo 40-131.

1. HM/HW Program Structure.

a. MEDDAC HM/HW Coordinator (Who it is, when and how do you contact).

b. MEDDAC Safety Manager (Who it is, when and how do you contact).

c. Section NCOIC (Who it is, when and how do you contact).

2. Goal of the HM/HW Program.

a. Provide safe and healthful work environment.

b. Prevent/minimize exposures to HM/HW.

c. Prevent unnecessary generation of HW (cost of disposal).

3. Employee Responsibility.

a. Learn MEDDAC Memo 200-2 and MEDDAC Memo40-131.

b. Learn unit Safety SOP.

c. Follow HM/HW and RMW regulations and procedures.

d. Attend training classes at MEDDAC/Unit level.

4. HM/HW Education and Training Program.

a. Inform employee of when and what training will be provided.

(1) All section NCOIC’s will receive quarterly training provided by the HM/HW Manager. Newcomers will attend the initial training provided by the Safety Manager and utilize the web base Healthcare Education System (HES).

(2) Clinic NCOIC will conduct training based from the quarterly training received.

b. Definition of HM, HW, and RMW.

c. Specific location and identification of clinic's HM.

d. Proper procedures for selecting, handling, storing, using, and disposing of clinic's HM.

e. Proper procedures to be taken in the event of a HM spill.

` f. Health hazards of mishandling HM.

5. HM Spill or Exposure Reporting. Outline must be detailed enough to demonstrate that personnel are taught their responsibilities and actions in the HM/HW management area.